

CLAIMS

1-19. (Cancelled)

20. (Currently Amended) A system for decoding an audio signal, said system comprising:

one or more audio decoding circuits for performing one or more functions on a frame of encoded audio data, wherein the one or more audio decoding functions comprises ~~prediction decoding~~; circuits comprise:

a Huffman decoder for Huffman decoding the frame of encoded audio data;

a prediction decoder for prediction decoding the frame of encoded audio data; and

an intensity coupling circuit for intensity coupling the frame of encoded audio data

a memory for storing results of the one or more audio decoding functions comprising ~~prediction decoding on the frame of encoded data~~; of the Huffman decoding of the frame of encoded audio data, the results of the prediction decoding of the encoded audio frame, and the results of intensity coupling the frame of encoded audio data, wherein the results of the prediction decoding for the frame of encoded audio data at least partially overwrite the results of the Huffman decoding of the frame of encoded audio data, and wherein the results of the intensity coupling for the frame of encoded audio data at least partially overwrite the results of the prediction decoding of the frame of encoded audio data

a bitstream demultiplexer for bitstream demultiplexing the frame of encoded audio data; and

wherein the memory stores the results of bitstream demultiplexing the encoded audio data over at least a portion of the results of the one or more audio decoding functions comprising ~~prediction decoding~~.

21-23. (Cancelled)

24. (Currently Amended) The system of claim 20 22, wherein the one or more audio decoding circuits further comprise a filter bank.

25. (Currently Amended) The system of claim 20 22, wherein the one or more circuits further comprises a temporal noise shaper.

26. (Currently Amended) A system for decoding an audio signal, said system comprising:

a first audio decoding circuit for performing a first audio function on a frame of encoded audio data, wherein the first audio decoding circuit is selected from a group consisting of an inverse quantizer for inverse quantizing the frame of encoded audio data, a bitstream demultiplexer for demultiplexing the frame of encoded audio data, and a filter bank for filtering the frame of encoded audio data;

a memory for storing outputs of the first audio decoding circuit;

a second audio decoding circuit for performing a second audio function on a frame of encoded audio data, wherein the second audio decoding circuit is selected from a group consisting of a bitstream demultiplexer for demultiplexing the frame of encoded audio data, a filter bank for filtering the frame of encoded audio data, and an intensity coupler for intensity coupling the frame of encoded audio data; and

wherein the memory stores the outputs of the second audio decoding circuit on the frame over at least a portion of the results of the first audio decoding circuit on the frame.

27. (Previously Presented) The system of claim 26, wherein the first audio decoding circuit comprises a filter bank for filtering the frame of encoded audio data and wherein the second audio decoding circuit comprises a bitstream demultiplexer, and further comprising:

an intensity coupler for intensity coupling the frame of encoded audio data; and

wherein the memory stores the output of the intensity coupler over at least a portion of the results of the second audio decoding circuit.

28. (Previously Presented) A method for decoding an audio signal, said method comprising:

performing one or more functions on a frame of encoded audio data, wherein the one or more audio decoding functions comprises prediction decoding;

storing results of the one or more audio decoding functions comprising prediction decoding on the frame of encoded data;

bitstream demultiplexing the frame of encoded audio data; and

storing the results of bitstream demultiplexing the encoded audio data over at least a portion of the results of the one or more audio decoding functions comprising prediction decoding.

29. (Previously Presented) The method of claim 28, further comprising:

Huffman decoding the frame of encoded audio data; and

storing results of Huffman decoding the encoded audio data in the memory over at least another portion of the results of the one or more audio decoding functions comprising decoding.

30. (Previously Presented) The system of claim 28, wherein the one or more functions further comprises intensity coupling the encoded audio data.

31. (Previously Presented) The system of claim 28, wherein the one or more functions further comprise a filter bank function.

32. (Previously Presented) The system of claim 28, wherein the one or more functions further comprises a temporal noise shaping.